

**- Cox -**

On February 1, 1995, Cox acquired Times Mirror's cable holdings. Cox's results have been adjusted as though this transaction took place at the beginning of the year. Cox's revenue and cash flow assume the acquisition had occurred at the beginning of the year. Cox's average subscriber number was calculated assuming that it had controlled the Times Mirror subscribers for the entire year.

Cox's revenue and cash flow were adjusted for the removal of its satellite operations. This reduced its revenue by \$41.084 million and increased its cash flow by \$0.598 million.

**- Marcus -**

On January 1, 1995, Marcus acquired cable systems from Crown Media, Inc., which added 193,300 subscribers to its 1994 year-end subscriber figure. On November 1, 1995, Marcus acquired cable systems from Sammons Communications, Inc. Marcus' results have been adjusted as though this transaction took place at the beginning of the year. Marcus' revenue was increased by \$129.32 million (\$116.388 million for the first nine months of the year plus one-ninth of that number for October) and its cash flow was increased by \$77.327 million (\$69.594 million for the first nine months of the year plus one-ninth of that number for October.) Marcus' year-end 1994 subscriber figure was increased by 650,000 subscribers (the subscribership of the acquired systems on March 30, 1995).

**- Century -**

Revenue and cash flow data are for the 12 months ending November 30, 1995. Its year-end subscriber number is as of May 31, 1995.

**- Adelphia -**

Adelphia's average subscribers, revenue, and cash flow are for the 12 months ending December 31, 1995. Its year-end subscriber number is as of that date.

**- TCA -**

TCA's average subscribers, revenue, and cash flow are for the 12 months ending January 31, 1996. Its year-end subscriber number is as of that date.

**TABLE 7B**  
**1996 Cable Industry Revenue and Cash Flow Calculations**

Company	Year-End Subscribers	Average Subscribers	Annual Cable Revenue (mil.)	Monthly Cable Revenue Per Subscriber	Annual Cable Cash Flow (mil.)	Annual Cable Cash Flow Per Subscriber	Average Cash Flow Margin
TCI Communications <sup>(1)</sup>	13,900,000	13,197,000	\$5,860.00	\$37.00	\$2,230.00	\$168.98	38.1%
Time Warner <sup>(2)</sup>	12,300,000	11,034,500	\$4,760.00	\$35.94	\$2,012.00	\$182.33	42.3%
US West (Media One) <sup>(2)</sup>	4,354,287	4,210,541	\$1,051.19	\$20.81	\$1,473.00	\$349.84	40.1%
Comcast <sup>(1)</sup>	4,280,000	3,843,500	\$1,914.00	\$41.49	\$919.00	\$239.10	48.0%
Cox Communications <sup>(1)</sup>	3,259,384	3,254,072	\$1,460.00	\$37.38	\$556.90	\$171.14	38.1%
Cablevision Systems <sup>(1)</sup>	2,445,000	2,253,100	\$1,096.63	\$40.56	\$448.00	\$198.84	40.9%
Adelphia Commctns <sup>(1)</sup>	1,824,000	1,413,380	\$473.00	\$27.87	\$242.00	\$171.22	51.2%
Marcus Cable <sup>(1)</sup>	1,275,000	1,214,859	\$435.00	\$29.84	\$204.00	\$167.92	46.9%
Century Communications <sup>(1)</sup>	1,250,000	1,175,000	\$457.00	\$32.41	\$253.00	\$215.319	55.4%
Lenfest Group <sup>(2)</sup>	1,110,703	853,535	\$354.56	\$34.61	\$182.91	\$214.28	51.6%
Falcon Cable TV <sup>(2)</sup>	1,017,000	1,079,041	\$217.32	\$16.78	\$120.14	\$111.34	55.3%
TCA Cable TV, Inc. <sup>(1)</sup>	627,000	600,736	\$253.31	\$35.14	\$120.00	\$199.75	47.4%
InterMedia Partners <sup>(2)</sup>	573,655	563,828	\$106.42	\$15.73	\$48.49	\$86.00	45.6%
Post-Newsweek Cable <sup>(1)</sup>	588,000	553,000	\$230.00	\$34.66	\$98.00	\$177.22	42.6%
Jones Intercable <sup>(2)</sup>	585,000	512,200	\$248.63	\$40.45	\$100.50	\$196.21	40.4%
<b>Total For Group</b>	<b>49,089,029</b>	<b>45,608,293</b>	<b>\$18,917.060</b>	<b>\$32.05</b>	<b>\$9,007.938</b>	<b>\$189.97</b>	<b>47.6%</b>
<b>Total For Industry</b>	<b>63,500,000</b>	<b>62,800,000</b>	<b>\$26,044.416</b>	<b>\$34.56</b>	<b>\$12,403.628</b>	<b>\$197.51</b>	<b>47.6%</b>
<b>Percent Change From Previous Year</b>	<b>4.02%</b>	<b>3.03%</b>	<b>6.51%</b>	<b>3.18%</b>	<b>9.33%</b>	<b>11.67%</b>	<b>8.82%</b>

(1) Paul Kagan Assoc., *Cable TV Investor*, December, 1996 - May, 1997.

(2) Information derived from company 10-K or direct correspondence with the company.

**1996 Notes:****- Adelphia -**

Fiscal year-end March 31, 1997.

**- Century -**

Fiscal year-end May 31, 1997.

**- Comcast -**

Comcast acquired Scripps on November 1, 1996. Comcast numbers are pro forma Scripps acquisition.

**- Continental -**

When Continental reports its basic subscribership, it includes, on an equity basis, subscribers from its partially owned affiliates. Those subscribers were removed from the 1995 year-end subscriber number (123,364). Therefore, the 1996 average subscribers number has been adjusted as well.

Continental's revenue and cash flow were adjusted for the removal of its satellite operations. This reduced its revenue.

**- Falcon Cable TV -**

The Partnership reports subscribers for the Systems on an equivalent subscriber basis and, unless otherwise indicated, the term "SUBSCRIBERS" means equivalent subscribers, calculated by dividing aggregate basic service revenues by the average basic service rate within an operating entity. Consistent with past practices, subscribers is an analytically derived number which is reported in order to provide a basis of comparison to previously reported data. The computation of subscribers has been impacted by change in service offerings made in response to the 1992 Cable Act.

On July 12, 1996, the Partnership acquired the assets of Falcon Cable Systems Company ("FCSC") and, as a result, the systems of FCSC became owned systems; previously they were reported as Affiliated Systems. As a result, comparisons of 1996 to prior years must take this change into account. At December 31, 1996, the FCSC systems had approximately 239,431 homes passed, 135,550 homes subscribing to cable service, 44,199 premium service units and 170,561 Subscribers. At December 31, 1995 and 1994, the corresponding totals for the FCSC systems were 233,304 and 228,522 homes passed, 135,475 and 133,249 homes subscribing to cable service, 52,694 and 59,732 premium service units and 219,269 and 193,008 subscribers, respectively.

**- TCA Cable -**

TCA's average subscribers, revenue, and cash flow are for the 12 months ending January 31, 1997. Its year-end subscriber number is as of that date.

**- US West (MediaOne) -**

US West acquired Continental Cablevision on November 15, 1996, and became "MediaOne." The US West numbers represented here are pro forma Continental Cablevision acquisition.

**TABLE B-8**  
**Acquisition of Capital: 1989 - June 1997**  
**(\$ in million)**

Year	Private Debt		Public Debt		Private Equity		Public Equity		Total Capital Raised From Financing Sources*
	Sum Raised	% of Total	Sum Raised	% of Total	Sum Raised	% of Total	Sum Raised	% of Total	
1989	\$6,494	80%	\$840	10%	\$726	9%	\$108	1%	\$8,168
1990	\$4,637	81%	\$490	9%	\$597	10%	\$0	0%	\$5,724
1991	\$689	16%	\$912	22%	\$1,290	30%	\$1,350	32%	\$4,241
1992	\$(1,762)	-69%	\$2,400	93%	\$1,710	67%	\$220	9%	\$2,568
1993	\$(3,583)	-186%	\$5,280	274%	\$62	3%	\$165	9%	\$1,924
1994	\$4,772	71%	\$1,089	16%	\$409	6%	\$461	7%	\$6,731
1995	\$(808)	-9%	\$4,500	51%	\$1,109	13%	\$3,976	45%	\$8,777
1996	\$2,616	38%	\$1,354	20%	\$49	1%	\$3,450	41%	\$7,469
Jan - Jun 1997	\$735	9%	\$6,972	84%	\$12	0%	\$1,200	7%	\$8,919
Total: 1989-June 1997	\$13,790		\$23,837		\$ 5,964		\$17,215		\$60,806
Average Raised Per Year	\$1,622		\$2,804		\$702		\$2,025		\$7,153

\* Total Capital Raised From Financing Sources = Private Debt + Public Debt + Private Equity + Public Equity.

**Sources:**

- 1989 - Paul Kagan Assoc., Inc., *Estimated Capital Flows in Cable TV*, The Cable TV Financial Databook, June 1993, at 86.
- 1990 - Paul Kagan Assoc., Inc., *Estimated Capital Flows in Cable TV*, The Cable TV Financial Databook, June 1994, at 92.
- 1991 - Paul Kagan Assoc., Inc., *Estimated Capital Flows in Cable TV*, The Cable TV Financial Databook, July 1995, at 92.
- 1992 to 1995 - Paul Kagan Assoc., Inc., *Estimated Capital Flows in Cable TV*, The Cable TV Financial Databook, July 1996, at 115.
- 1996 - Paul Kagan Assoc., Inc., *Cable Financing Snapshot*, Cable TV Finance, Jan. 31, 1997 at 10.
- 1997 - Paul Kagan Assoc., Inc., *Cable Financing Snapshot*, Cable TV Finance, July 31, 1997 at 8.

**TABLE B-9**  
**System Transactions: 1994 - June 1997**

	1994	1995	94-95 Change	1996	95-96 Change	Jan - Jun 1997
Number of Systems Sold	64	128	100%	103	-19.5%	44
Total Number of Subscribers	7,504,177	10,937,652	45.8%	7,800,000	-28.7%	2,385,232
Average System Size	117,253	85,450	-27.1%	75,728	-11.4%	54,210
Number of Homes Passed	12,492,997	17,216,963	37.8%	12,610,000	-26.8%	3,713,965
Avg. # of Homes Passed	195,203	134,507	-31.1%	122,427	-9.0%	84,408
Total Dollar Value (mil.)	\$14,025	\$20,083	43.2%	\$16,254	-19.1%	\$3,998
Average Dollar Value (mil.)	\$219	\$156	-28.4%	\$157	0.6%	\$904
Dollar Value Per Home	\$1,123	\$1,166	3.8%	\$1,246	6.9%	\$1,077
Dollar Value Per Subscriber	\$1,869	\$1,836	-1.8%	\$2,065	12.5%	\$1,677
Cash Flow Multiple	10.3x	9.7x	-5.8%	11.0x	13.4%	7.7x

**Sources:**

- **1994 and 1995** - Paul Kagan Assoc., Inc., *Year-To-Date Cable System Sale Summary*, Cable TV Investor, Feb. 24, 1997, at 12.
- **Jan 1997 to June 1997** - Paul Kagan Assoc., Inc., *Year-To-Date Cable System Sale Summary*, Cable TV Investor, July 9, 1997, at 10.

**TABLE B-10**  
**Price Comparison - Cable vs. DBS and MMDS**  
**Average Monthly Rate, As of July 1997**

	Cable	DBS	MMDS
Programming Service (Basic Service Tier and Cable Programming Services Tier)	\$26.33	\$27.49 <sup>(*)</sup>	\$21.29
Equipment	\$ 2.53	\$ 3.33 <sup>(**)</sup>	n/a <sup>(***)</sup>
Total (Programming and Equipment)	\$28.83	\$30.82	\$21.29
Average Number of Channels	49.5	47	22.7
Average Monthly Rate per Channel	\$0.63	\$0.66	\$0.94
Installation (One time Charge)	\$39.56	\$175.00 <sup>(****)</sup>	\$35.00

(\*)The service package most comparable to cable programming services; does not include local broadcast channels.

(\*\*) Average equipment cost for DBS service is a one time charge of \$200. If we assume this can be spread over a five year period (60 months), this is equivalent to \$3.33 per month (excluding any allowance for the time value of money). The costs associated with service to additional television sets is not included in these equipment charges.

(\*\*\*) Equipment changes are included with the charge for programming services.

(\*\*\*\*) Average cost of a professional installation. A "do-it-yourself" installation kit is also available at an average cost of \$50.

**Sources:**

- Cable: 1997 Cable Industry Price Survey
- DBS: SCBA. Average of DIRECTV and Primestar, the two largest DBS providers.
- MMDS: WCA's 1997 U.S. Wireless Cable Industry Directory. Average of 136 wireless cable operators reporting monthly service charge and number of channels offered in Directory.

**Table B-11**  
**Cable Modem Deployment as of May 15, 1997**

MSO	City(ies)	Modem Supplier	Monthly Rate	Install Charges
Adelphia	Palm Beach County, FL Ocean County, NJ Coudersport, Lansdale & Mt. Lebanon, PA Amherst, Tonawanda, & Grand Island, NY Plymouth, Adams & N. Adams, MA	General Instrument and LAN City (Bay Networks)	\$34.95 - \$44.95 \$39.95	\$99.95
Cablevision Systems	N. Oyster Bay, NY	LANCity (Bay Networks)	\$45.00	\$150
Comcast	Towson & Baltimore, MD Sarasota, FL Union, NJ	Motorola	\$39.95 - \$59.95	\$175
U S West Media One	Boston, MA area Detroit, MI area Jacksonville, FL Omaha, NE	LANCity (Bay Networks), and General Instruments	\$34.95 - \$59.95	\$99.95
Cox	Orange County, Mission Viejo, Poway & San Diego, CA Phoenix, AZ Meridian, CT	Motorola	\$44.95 - \$54.95	\$175
Jones Intercable	Alexandria, VA	LANCity (Bay Networks)	\$39.95	\$99.95
TCI	Arlington Heights, IL E. Lansing, MI Fremont & Sunnyvale, CA Hartford, CT Seattle, WA	Zenith, LANCity (Bay Networks), and Motorola	\$34.95 - \$44.95	\$69 - \$150
Time Warner	Akron & Canton, OH Corning, Elmira, Binghamton, Albany, Troy & Saratoga, NY San Diego, CA Portland, ME	Motorola, Hewlett Packard, and Toshiba	\$24.95	\$200

**Sources:**

- Fred Dawson, *Cable Modems Pass 2M Mark; MSOs Turn to Next Phase*, Multichannel News, March 17, 1997 at 119 and 135.
- Michael Harris, *Cable Modem Commercial Launches and Trials in North America*, Kinetic Strategies, May 15, 1997. See <http://CableDatacomNews.com/cm1c7.htm>.



## Appendix C

Table C-1

## Satellite Orbital Positions

Licensee	Total Channels	Western Positions				Eastern Positions			
						"Full CONUS" (a)			
		175°	166°	157°	148°	119°	110°	101°	61.5°
DIRECTV	54			27				27	
USSB	16				8		3	5	
Echostar	35	(b)	(b)		24 (c)	11			
Direcst	22	11				10	1		
DBSC	22	11							11
MCI	28						28 (d)		
Tempo/ Primestar(g)	22		11			11			
Continental (Rainbow/ Loral DBS)	22		11						11
Dominion	8 (f)		(e)						8
Unassigned	27	10	10	5					2
Total	256	32	32	32	32	32	32	32	32

## Notes:

- (a) "Full CONUS" indicates that the signal transmissions from satellites in these orbital slots are capable of reaching all parts of the continental United States.
- (b) Echostar has petitioned the Commission for 11 channels at 166° and 175° west latitude.
- (c) Echostar won the auction for the 24 channels at 148° west latitude.
- (d) MCI won the auction for the 28 channels at 110° west latitude.
- (e) Dominion has petitioned the Commission for 8 channels at 166° west latitude.
- (f) Dominion has a second petition pending before the Commission for 11 channels at an unspecified orbital position.
- (g) Tempo is a wholly-owned subsidiary of TCI Satellite Entertainment.

Source: Number of DBS Channels by Ownership and Orbital Locations Table, FCC, 1997; USB Securities, Jun. 1996, at 26.

Table C-2

## DBS Industry Licensed Number of Transponders and Their Ranges

Company	Full CONUS <sup>(1)</sup>	Other Positions	Total	Full CONUS <sup>(1)</sup>	Total Positions
DIRECTV	27	27	54	28%	21%
USSB	8	8	16	8%	6%
Echostar	11	24	35	11%	14%
Directsat	11	11	22	11%	9%
DBSC	0	22	22	0%	9%
MCI	28	0	28	29%	11%
Tempo/ Primestar (2)	11	11	22	11%	9%
Continental (Rainbow/ Loral DBS)	0	22	22	0%	9%
Dominion	0	8	8	0%	3%
Unassigned	0	27	27	0%	11%
<b>Total</b>	<b>96</b>	<b>160</b>	<b>256</b>	<b>100%</b>	<b>100%</b>
DBS Providers Orbital Positions	Full CONUS <sup>(1)</sup>	Other Positions	Total	Full CONUS <sup>(1)</sup>	Total Positions
DIRECTV/USSB	35	35	70	36%	27%
Echostar	11	24	35	11%	14%
Tempo/ Primestar (2)	11	11	22	11%	9%

## NOTES:

(1) "Full CONUS" indicates that the signal transmissions from satellites in these orbital slots are capable of reaching all parts of the continental United States.

(2) Tempo is a wholly-owned subsidiary of TCI Satellite Entertainment.

## SOURCES:

*Number of DBS Channels by Ownership and Orbital Locations Table*, FCC, 1997; Rick Westerman, *Direct Broadcast Satellite, Outlook*, UBS Securities, Mar. 4, 1997, at 9.

Table C-3

## DBS Providers

<b>DBS STATISTICS</b>	<b>DIRECTV<sup>(1)</sup></b>	<b>USSB</b>	<b>Primestar</b>	<b>Echostar</b>
<b>Launch Date</b>	June 1994	June 1994	January 1994	March 1996
<b>Subscribers</b>				
Sept. 1997	2,892,000	(included with	1,809,000	820,000
Sept. 1996	1,920,000	DIRECTV <sup>(2)</sup> )	1,475,000	190,000
Change	972,000		334,000	630,000
Growth	50.6%		22.6%	331.6%
<b>Channels<sup>(3)</sup></b>	175 HP	29 HP	165 MP	140 HP
<b>Basic Programming Package</b>	"Total Choice" 44 basic channels	"The Basics" 9 basic channels	"Prime Value" 50 basic channels	"DISH Pix" 10 basic channels
<b>Monthly Cost</b>	\$29.99	\$7.95	\$24.99 (4)	\$15.00
<b>Most Complete Programming Package</b>	"Total Choice Platinum" 75 basic channels, 29 sports channels, 14 premium movie channels	"Entertainment Plus" 8 basic channels, 18 premium movie channels	"Light Up the Sky" 66 basic channels, 14 premium movie channels	"America's Top 50" 50 basic channels, 1 regional sports channel
<b>Monthly Cost</b>	\$47.99	\$34.95	\$65.99	\$26.99 (5)

DBS STATISTICS	DIRECTV	USSB	Primestar	Echostar
<b>System Costs<sup>(6)</sup></b> <b>Single Receiver</b> <b>Dual Receiver</b>	\$199 \$350	\$199 \$350	\$199 <sup>(7)</sup> \$398	\$199 \$300
<b>Professional Installation</b> <b>Self-Installation</b>	\$150-\$200 \$50	\$150-\$200 \$50	\$149 <sup>(8)</sup> N/A	\$179 \$70
<b>Equipment Sources</b>	Electronics/TV retailers, AT&T, DSS equipment manufacturers (e.g. RCA, Hitachi, Sony)	Electronics/TV retailers and AT&T	MSO partners. Radio Shack. Key America and Associated Volume Buyer's	Electronics/TV retailers

**Notes:**

- (1) DIRECTV and United States Satellite Broadcasting Company, Inc. ("USSB") are complementary DBS services. They use the same technology, jointly market the same equipment, and together provide 200 channels of mutually exclusive programming. *1996 Report*, 12 FCC Rcd at 4378 ¶ 41 n. 90.
- (2) DIRECTV and USSB subscribers are reported together in *DTH Subscribers*, SkyREPORT, Nov. 1997, at 10. SkyREPORT's count of the number of DIRECTV/USSB subscribers is based on households that subscribe to either of these services to avoid "double-counting" subscribers that subscribe to both services.
- (3) "HP" - "High Power" Ku-Band Direct Satellite Service (DSS) uses an 18" dish. "MP" - "Medium Power" Ku-Band Fixed Satellite Service (FSS) uses a 27" or 36" dish (depending upon the subscriber's location).
- (4) Primestar's subscribers have the option to purchase equipment or rent it for an additional \$10 monthly charge.
- (5) Echostar charges subscribers \$300, or the equivalent of \$25 per month, if they purchase one year of the "America's Top 50" programming package in advance.
- (6) The cost of equipment varies depending upon discounts and other incentives offered by equipment retailers. The basic antenna dish receiver system is capable of providing satellite programming to one television channel at a time on multiple television sets. The dual antenna dish receiver system can provide multiple channels of satellite programming to two to three television sets simultaneously.
- (7) Primestar subscribers can also purchase used equipment for \$149.
- (8) Primestar mandates that subscribers that rent must have their equipment professionally installed, but the company is giving these customers a \$100 rebate off the installation cost through Jan. 1998.

**Sources:**

*DTH Subscribers*, SkyREPORT, Nov. 1997, at 10; *1996 Report*, 12 FCC Rcd at 4378-4381 ¶ 41;  
<http://www.PrimeStar.com/ezget/whatsnew/sept.htm>;  
<http://www.dishnetwork.com/prog/quick.htm>;  
<http://www.dishnetwork.com/need/premium.htm>; <http://www.USSB.com/package.html>;  
<http://www.directv.com/programming/compare.html>; [http://dishonline.com/4dtv\\_1.htm](http://dishonline.com/4dtv_1.htm); [www.dishonline.com/rca.htm](http://www.dishonline.com/rca.htm).

Table C-4-A

## Direct-To-Home Satellite Services

## Total Subscribers

PROVIDERS	July 1, 1994	July 1, 1995	July 1, 1996	July 1, 1997
DBS	70,000	1,150,000	2,950,000	5,047,000
HSD	1,922,810	2,321,350	2,336,930	2,184,470
<b>Total</b>	<b>1,992,810</b>	<b>3,471,350</b>	<b>5,286,930</b>	<b>7,231,470</b>

Table C-4-B

## Annual Subscriber Growth

PROVIDERS	1994-1995	1995-1996	1996-1997
DBS	1,080,000	1,800,000	2,097,000
HSD	398,540	15,580	-152,460
<b>Total</b>	<b>1,478,540</b>	<b>1,815,580</b>	<b>1,944,540</b>

Table C-4-C

Subscribers Growth Rate  
(Percentage Change)

PROVIDERS	1994-1995	1995-1996	1996-1997
DBS	1,542.9%	156.5%	71.1%
HSD	20.7%	0.7%	-6.5%
<b>Total</b>	<b>74.2%</b>	<b>52.3%</b>	<b>36.8%</b>

Source: SBCA Comments at Appendix A; *DTH Subscribers*, SkyREPORT, Nov. 1997, at 10.

Table C-5

## DTH Subscribers

Date	HSD	DIRECTV/ USSB*	Prime- Star	Echo Star	Alpha Star	Monthly Total	Month- to-Month Change
Oct-96	2,314,950	2,028,000	1,550,000	235,000	12,000	6,139,950	
Nov-96	2,302,770	2,135,000	1,580,000	285,000	20,000	6,322,770	182,820
Dec-96	2,277,760	2,300,000	1,600,000	350,000	35,000	6,562,760	239,990
Jan-97	2,255,860	2,370,000	1,610,000	396,000	37,000	6,668,860	106,100
Feb-97	2,234,600	2,420,000	1,630,000	437,000	40,000	6,761,600	92,740
Mar-97	2,224,810	2,470,000	1,662,000	480,000	45,000	6,881,810	120,210
Apr-97	2,215,210	2,520,000	1,700,000	513,000	51,000	6,999,210	117,400
May-97	2,194,380	2,575,000	1,738,000	545,000	51,000	7,103,380	104,170
Jun-97	2,184,470	2,639,000	1,767,000	590,000	51,000	7,231,470	128,090
<b>Cumulative Total</b>							<b>1,091,520</b>

**Notes:**

\*SkyREPORT's count of the number of DIRECTV/USSB subscribers is based on households that receive either of these services to avoid "double-counting" subscribers that subscribe to both services.

**Source:**

*DTH Subscribers*, SkyREPORT, Nov. 1997, at 10.

## Appendix D

Table D-1

**Top Ten SMATV Operators Serving MDUs  
(Ranked by Number of Units Passed)**

<b>1997 Rank (1996 Rank)</b>	<b>Company</b>	<b>Properties</b>	<b>Units Passed</b>	<b>Retail Subs.</b>	<b>Bulk Subs.</b>
1 (2)	OpTel (i)	943	284,260	101,460	46,000
2 (1)	ICS (Interactive Cable Systems)	450	132,000	65,000	5,000
3 (3)	Cable Plus	324	115,000	55,000	18,000
4 (4)	Mid-Atlantic Cable	155	75,000	38,500	3,500
5 (6)	Liberty/RCN	235	68,000	32,000	16,000
6 (7)	MTS (MultiTechnology Services)	117	60,000	36,000	0
7 (5)	CAI Wireless (ii)	211	57,410	23,510	10,020
8 (8)	Edward Rose & Sons	63	34,580	23,540	0
9 (10)	Wireless Cable of Atlanta (ii) (iii)	35	14,500	8,600	400
10 (iv)	Ultronics	104	7,700	3,650	1,450
	<b>TOTALS</b>	<b>2,637</b>	<b>848,450</b>	<b>387,260</b>	<b>100,370</b>

**Notes:**

(i) Information on OpTel has been revised to reflect its acquisition of Phonosope and TARA Communications Systems, Inc. this year.

(ii) Some CAI Wireless and Wireless Cable of Atlanta subscribers also receive MMDS service.

(iii) BellSouth signed an agreement to acquire Wireless Cable of Atlanta on Feb. 12, 1997.

(iv) Ultronics was not among the top ten SMATV operators last year.

**Sources:**

Paul Kagan Associates, Inc., *Private Cable Census*, Private Cable Investor, Dec. 31, 1996, at 2; *News, CEA Announces Sale of Private Cable Systems*, Private Cable & Wireless Cable, Jun. 1997, at 89; Joe Estrella, *Private Cable Giant Buys Houston MDUs*, Multichannel News, Sep. 8, 1997, at 47; *BellSouth Acquires Wireless Cable of Atlanta, Video Services to be Available to 900,000 Households*, BellSouth News Release, Feb. 12, 1997.

## Appendix E

Table E-1

## Assessment of Competing Technologies (i)

Technology Used					
	Dec. 1993	Dec. 1994	Dec. 1995	Dec. 1996	Jun. 1997
(1) TV Households(ii) Pct. Change	94,200,000	95,400,000 1.27%	95,900,000 0.52%	97,000,000 1.15%	97,000,000 0.00%
(2) MVPD Households(iii) Pct. Change Pct. of Households	60,283,000  63.99%	63,936,620 6.06% 67.02%	68,487,750 7.12% 71.42%	72,370,950 5.67% 74.61%	73,646,970 1.76% 75.92%
(3) Cable Subs. Per Cent Change Pct. of MVPD Total	57,200,000  94.89%	59,700,000 4.37% 93.37%	62,100,000 4.02% 90.67%	63,500,000 2.25% 87.74%	64,150,000 1.02% 87.10%
(4) MMDS Subs. Pct. Change Pct. of MVPD Total	397,000  0.66%	600,000 51.13% 0.94%	851,000 41.83% 1.24%	1,180,000 38.66% 1.63%	1,100,000 -6.78% 1.49%
(5) SMATV Subs. Pct. Change Pct. of MVPD Total	1,004,000  1.67%	850,000 -15.34% 1.33%	962,000 13.18% 1.40%	1,126,000 17.05% 1.56%	1,162,500 3.24% 1.58%
(6) HSD Subs. Pct. Change Pct. of MVPD Total	1,612,000  2.67%	2,178,000 35.11% 3.41%	2,365,400 8.60% 3.45%	2,277,760 -3.71% 3.15%	2,184,470 -4.10% 2.97%
(7) DBS Subs. Pct. Change Pct. of MVPD Total	< 70,000  0.12%	602,000 760.00% 0.94%	2,200,000 265.45% 3.21%	4,285,000 94.77% 5.92%	5,047,000 17.78% 6.85%
(8) OVS Subs. (iv) Pct. Change Pct. of MVPD Total				2,190 0.0%	3,000 36.99% 0.00%
(9) VDT Subs. (Trials) (v) Pct. Change Pct. of MVPD Total		6,620 0.01%	9,350 41.24% 0.01%	0 -100.00% 0.00%	0 0.00% 0.00%



## NOTES:

- (i) Some numbers have been rounded.
- (ii) The year-end 1996 and June 1997 figures are the same because Nielsen's annual update does not take effect until September, the beginning of the new television season.
- (iii) The total number of MVPD households is likely to be somewhat less than the given figure due to households subscribing to the services of more than one MVPD. See e.g. 1994 Report, 9 FCC Rcd at 7480 ¶ 74. The number of such households is likely low, however, so the given total can be seen as a reasonable estimate of the number of MVPD households. See (2) under Sources.
- (iv) This system was formerly Bell Atlantic's VDT system in Dover Township, New Jersey, which has been converted to an OVS system. See note (v).
- (v) The 1996 Act repealed the VDT framework. For details, see ¶¶ 109, 113 and 117 *supra*. These trials were converted to an OVS format and cable franchises. See note (iv).

## SOURCES:

- (1) Television households: 1992-94 from A. C. Nielsen Co. as of January of the following year cited by Veronis, Suhler & Associates, *Homes Passed by Cable and Incidence of Subscription*, The Veronis, Suhler & Associates Communications Industry Forecast, July 1995, at 145; 1995 from Nielsen Media Research as cited in *Broadcasting & Cable*, Jan. 8, 1996, at 50; 1996 from Nielsen Media Research as cited in *Broadcasting & Cable*, Jan. 13, 1997 at 118; and 1997 from Nielsen Media Research as cited in *The TV Column*, Washington Post, Aug. 26, 1997, at E4.
- (2) Total MVPD households: The sum of the total number of subscribers listed under each of the categories of the various technologies. See note (ii) above. Because there were no permanent VDT subscribers, trial VDT subscriber figures were used in 1994-95.
- (3) Cable subscribers: 1992-94 from Paul Kagan Associates, Inc., *History of Cable and Pay-TV Subscribers and Revenues*, Cable TV Investor, June 30, 1995, at 5; 1995-97 from Paul Kagan Associates, Inc., *Paul Kagan's 10-Year Cable TV Industry Projections*, The Cable TV Investor, May 20, 1997, at 9.
- (4) MMDS subscribers: 1992-1994 from Paul Kagan Associates, Inc., *Wireless Cable Industry Projections, 1992-2002*, The 1995 Wireless Cable Databook, Jan. 1995, at 23; 1995-1996 from Paul Kagan Associates, Inc., *Wireless Cable Futures*, Wireless Cable Investor, Dec. 31, 1996, at 10-11; and 1997 from WCAI Comments at 8.
- (5) SMATV subscribers: 1992-1994 based on discussion with John Mansell, Senior Analyst, Paul Kagan Associates, Inc. and reference to *Cable & Pay TV Census -- December*, Marketing New Media, Dec. 19, 1994; 1995-1996 from *Private Cable Growth*, Private Cable Investor, Jul. 1997, at 3. The 1997 subscribers have been estimated by the FCC based on data from Paul Kagan Associates, Inc., *Private Cable Growth*, Private Cable Investor, Jul. 1997, at 3.

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- (6) HSD subscribers: 1992 from *C-Band Subscriptions in the Sky*, SkyREPORT, 1st Q 1994 at 12, and information provided by the SkyTRENDS research staff based on the number of General Instrument authorizations for receipt of scrambled programming; 1993 from *Subscription Data from General Instrument VC II+ Authorizations*, SkyREPORT, Oct. 1994, at 21; 1994 from *1994 Net Authorizations*, SkyREPORT, Feb. 1995, at 9. (The 1992-94 HSD subscriber figures were reduced by 1% to account for the estimated number of Canadian subscribers.) 1995 from *DTH Subscribers*, SkyREPORT, Jan. 1997, at 8 and SBCA Comments at Appendix A; and 1996-1997 from *DTH Subscribers*, SkyREPORT, Nov. 1997, at 10.
- (7) DBS subscribers: 1993 from *Let the Games Begin*, SkyREPORT, May 1994, at 2; 1994 from Kent Gibbons, *DBS: We're Walking the Walk*, Multichannel News, Jan. 16, 1995, at 3, 52; 1995 from *DTH Subscribers*, SkyREPORT, Jan. 1997, at 8; and 1996-1997 from *DTH Subscribers*, SkyREPORT, Nov. 1997, at 10.
- (8) OVS subscribers: 1996 from Bell Atlantic Comments at 5. The 1997 subscribers have been estimated by the FCC.
- (9) VDT trial subscribers: 1994-95 from Section 214 Applications, *ex parte* letters and associated filings with the FCC.

TABLE E-2

**Number and Subscriber Size of Major Cable System Clusters  
(Cumulative Figures)**

Range of Clustered Subscribers (thousands)	1994		1995		1996	
	Clusters	Subs. (millions)	Clusters	Subs. (millions)	Clusters	Subs. (millions)
100-199	58	8.0	76	10.4	76	10.3
200-299	26	6.0	35	8.4	34	8.3
300-399	6	2.0	8	2.8	11	3.7
400-499	3	1.3	10	4.5	8	3.6
> 500	4	2.8	8	5.1	10	7.7
<b>Total</b>	<b>97</b>	<b>20.1</b>	<b>137</b>	<b>31.2</b>	<b>139</b>	<b>33.6</b>

**Sources:**

Paul Kagan Associates, Inc., *Major Cable TV Systems/Clusters*, The Cable TV Financial Databook, 1995, at 38-39; 1996, at 38-40; 1997, at 39-41.

TABLE E-3

1997 Cable MSO Horizontal Concentration Nationwide<sup>1</sup>

Rank	Company	Per Cent of Subscribers <sup>2</sup>
1	TCI	29.32
2	Time Warner	18.33
3	MediaOne	7.98
4	Comcast	6.71
<b>Top 4</b>		<b>62.34</b>
5	Cox	5.10
6	Cablevision	4.50
7	Jones	2.30
8	Century	1.86
9	Marcus	1.85
10	Adelphia	1.83
<b>Top 10</b>		<b>79.77</b>
<b>Top 25</b>		<b>91.81</b>
<b>Top 50</b>		<b>96.93</b>
	<b>HHI</b>	<b>1379<sup>3</sup></b>

<sup>1</sup>Calculated by applying the Commission's attribution rules to account for market shares as of June 30, 1997, based on subscriber totals as of June 30, 1997, and reported in Paul Kagan Associates, Inc., *Top 100 Cable System Operators as of June 30, 1997*, Cable TV Investor, Sep. 10, 1997 at 10. If a cable operator might be attributable to more than one MSO, it was assigned to the largest MSO. Thus, there is no double counting of cable operators.

<sup>2</sup>The total number of industry subscribers used to calculate the HHIs is 64,150,000, as reported in Table E-1.

<sup>3</sup>The HHI is calculated on the basis of market shares for the top 50 companies. Because all of the remaining MSOs have very small shares of the market, an HHI calculation that included all cable system operators could only be slightly higher (no more than 2-3 points) than the given HHI.

**TABLE E-4**  
**Changes In Concentration Of The Cable Industry 1990-1997**

	1990	1991	1992	1993	1994	1995	1996	1997
<b>Top Share</b>	24.0	24.5	25.2	24.3	24.8	25.9	28.0	29.3
<b>Top 2</b>	36.7	37.1	37.9	36.9	37.3	42.1	46.9	47.7
<b>Top 3</b>	42.0	42.3	43.2	42.3	42.4	48.9	54.6	55.6
<b>Top 4</b>	45.6	46.0	48.2	47.2	47.2	54.6	61.4	62.3
<b>Top 10</b>	61.6	61.4	64.6	63.2	63.3	73.2	80.2	79.8
<b>Top 25</b>	80.8	80.2	84.5	83.1	83.4	88.5	91.5	91.8
<b>Top 50</b>	91.2	90.9	94.5	93.1	92.4	95.2	96.6	96.9
<b>HHI</b>	866	872	928	880	898	1098	1326	1379

The information provided in this Table is for purposes of comparison to corresponding tables in past reports.

**Data Sources:**

Data for 1997 from Table E-3 above.

Data for 1996 from *The Kagan Media Index*, August 31, 1996 at 8, 14; Paul Kagan Assoc., *Top 100 Cable System Operators as of March 31, 1996*, Cable TV Investor, June 20, 1996; Paul Kagan Assoc., *Top Private Cable Operators*, Private Cable Investor, December 31, 1995 at 2; Paul Kagan Assoc., *Apollo Cable Sale Complete*, Private Cable Investor, May 31, 1996, at 5 and SEC documents.

Data for 1995 from *1995 Report*, 11 FCC Rcd 2184 at Appendix G, Table 4. Data for 1990 through 1994 were calculated from information contained in Paul Kagan Assocs., Inc., *Cable TV Financial Databook* 14 (1991); Paul Kagan Assocs., Inc., *Pay TV Subscriber History*, Cable TV Financial Databook 12 (1992); Paul Kagan Assocs., Inc., *Pay TV Subscriber History*, Cable TV Financial Databook 12 (1993); and Paul Kagan Assocs., Inc., *Pay TV Subscriber History*, Cable TV Financial Databook 14 (1994), Paul Kagan Assoc., Inc.

The data for the years 1990-94 have been recalculated after discussions with Paul Kagan Associates personnel concerning that company's methodology for including consolidated, non-consolidated and international subscribers. International subscribers have been deducted from TCI's subscriber totals in 1991-93 and the estimate of TCI's subscribers in 1994 was similarly modified assuming continuation of historical trends. The figure for TCI's subscribership in 1990 is based on information contained in TeleCommunications, Inc., *Form 10-K*, Dec. 31, 1990, at I-2 to I-4.

TABLE E-5

1997 MVPD Horizontal Concentration Nationwide<sup>1</sup>

Rank	Company	Per Cent of Subscribers <sup>2</sup>
1	TCI	25.54
2	Time Warner	15.97
3	MediaOne	6.95
4	Comcast	5.84
<b>Top 4</b>		<b>54.30</b>
5	Cox	4.44
6	Cablevision	3.92
7	DirecTV/USSB	3.58
8	Primestar	2.40
9	Jones	2.00
10	Century	1.62
<b>Top 10</b>		<b>72.26</b>
<b>Top 25</b>		<b>84.94</b>
<b>Top 50</b>		<b>89.92</b>
	<b>HHI</b>	<b>1166<sup>3</sup></b>

<sup>1</sup>See Table E-3, n.1. Subscribers for DirecTV/USSB and Primestar based on *DTH Subscribers* (Chart), SkyREPORT, Oct. 1997, at 9.

<sup>2</sup>The total number of MVPD subscribers used to calculate the HHIs is 73,646,970 from Table E-1. Differences in totals reflect rounding.

<sup>3</sup>The HHI is calculated on the basis of market shares for the top 50 companies. Because all of the remaining MVPDs have very small shares of the market, an HHI calculation that included all cable system operators could only be slightly higher (no more than 2-3 points) than the given HHI.

Table E-6

## TCI Announced Acquisitions and Joint Ventures

Type of Transaction	Managing Partner	TCI Subs. Contributed (thousands)	TCI Equity Interest Taken	Geographic Areas of TCI Subs. Contributed
Acquisition	Cablevision	820	30.0%	NY, NJ
Joint Venture	Time Warner	555	50.0%	Houston, TX
Joint Venture	Time Warner	95	50.0%	Kansas City, KS
Joint Venture	Adelphia	166	minority	Great Lakes Area
Limited Partnership	Falcon	300	40.0%	AL, CA, MO, OR, WA
Limited Partnership	Intermedia	425	49.5%	KY
Joint Venture	TCA	150	20.0%	TX, LA
	<b>Total Subs. Contributed</b>	<b>2,511</b>		

Source: Table E-7.

TABLE E-7

**Consummated and Announced Cable System Transactions  
November 1996 - September 1997**

DATE	BUYER	SELLER	SYSTEMS	PRICE** (Mil.)	BASIC SUBS.	PRICE/ SUB.***	CASH FLOW MULT.
Nov-96	State Cable TV	Pegasus Cable	central/ northern NH	\$7.2	4,600	\$1,572	9.5
Dec-96	Various (6)	Booth American	FL; CA; MI; NC; SC; VA	\$287.1	144,200	\$1,991	10.0
Dec-96	Charter Communications	Masada Cable	MO; TN; AL; MT	\$55.0	31,300	\$1,757	9.1
Dec-96	New Path Communications	Regional Cable	IN; OH; MO; KY; IL; MI	\$8.2	12,100	\$671	5.5
Dec-96 (c)	Friendship Cable of AR	Douglas Communications, MidSouth	AR; MS	\$7.1	8,800	\$809	7.0
Dec-96	Star Vision (Genesis Cable Communications)	Milestone Communications	Roseboro/ Salemberg, NC	\$0.7	800	\$888	7.0
Jan-97	Mediacom	Saquaro Cable TV	Nogales, AZ	\$12.0	8,000	\$1,498	7.9
Jan-97	Mediacom	Valley Center Cable	Valley Center (San Diego), CA	\$2.8	2,000	\$1,407	7.4
Jan-97	St. Joseph Cable	Mark Twain Cablevision	Oak Creek/ Kachina, AZ	\$4.5	3,100	\$1,444	8.5
Jan-97	Rapid Communications	Cablevision of TX III	western OK	\$3.7	4,300	\$866	6.9
Jan-97	FrontierVision Partners	Deep Creek Cable TV	Deep Creek Lake, MD	\$2.9	2,300	\$1,240	8.1
Jan-97	Helicon Corp.	Mid-South Cable TV	Hamilton/ Roane/ Meigs, TN	\$2.3	2,000	\$1,150	8.0
Jan-97	Cooney Cable Association	Bath Cable TV	Hot Springs, VA	\$1.2	1,000	\$1,182	7.9
Jan-97	TCA	TCI	Jonesboro, AR	\$41.0	21,000	\$1,952	9.8



DATE	BUYER	SELLER	SYSTEMS	PRICE** (MM.)	BASIC SUBS.	PRICE / SUB.***	CASH FLOW MULT.
Jan-97	Friendship Cable of AR	TCI	Osceola, AR	\$7.6	8,500	\$900	7.0
Jan-97	Century Telephone	Pecoco	Dodge/ Columbia Cos., WI	\$3.9	3,300	\$1,183	8.5
Jan-97 (c)	Post-Newsweek	Verde Valley CATV	Cornville, AZ	\$0.7	700	\$987	7.0
Feb-97 (c)	Charter Communications	Prime Cable	Hickory, NC	\$68.1	35,000	\$1,946	9.8
Feb-97	Mid Atlantic Cable	Cecilton CATV	Cecil/ Kent Cos., MD	\$3.0	2,000	\$1,500	9.4
Feb-97 (c)	Adelphia	Small Cities Cable	Shelburne, VT	\$10.6	6,400	\$1,660	10.5
Feb-97	Jones Intercable	Jones Investors/MLP	Independence, MO	\$171.2	85,400	\$2,005	9.6
Mar-97	Marcus Cable	Harron Cable	Dallas, TX area	\$34.9	21,800	\$1,600	9.1
Apr-97	FrontierVision	Milestone Communications	Apple Valley, OH	\$3.0	2,200	\$1,395	8.0
Apr-97 (c)	Time Warner*	Marcus Cable*	W. Allis, De Pere, WI	\$98.0	55,000	\$1,782	9.1
Apr-97	Marcus Cable*	Time Warner*	Eau Claire, WI	\$98.0	70,000	\$1,400	9.0
Apr-97	Florida Cable	Performance Cable	Altoona, FL	\$0.6	700	\$893	7.0
May-97	Charter Communications	US West/MediaOne	Minneapolis, MN	\$600.0	290,000	\$2,069	10.0
May-97	Time Warner Entertainment*	Adelphia*	Mansfield, OH	\$96.5	67,600	\$1,428	8.8
May-97	Adelphia*	Time Warner Entertainment*	VA; VT; NH; NY	\$65.2	37,500	\$1,740	9.3